

## **IN THE CLAIMS:**

Please amend the claims as follows:

1. (Original) A burner and gas-injection device for melting furnaces for melting metal material comprising at least one injector (3) for gas having a hollow body defining a longitudinal axis (20), a first internal pipe (1) and a head (2), fixed to one end of said hollow body, provided with at least one nozzle (4) that sets said first pipe in communication with the outside, the device comprising at least one pipe for injection of carbon (31) in powder form set underneath the nozzle (4) characterised in that the nozzle (4) has at least the outlet cross section (13) of a substantially oblong shape, the nozzle (4) has a convergent-divergent shape.

2. (Original) The device according to Claim 1, wherein the divergent portion (18), of the nozzle (4) have cross sections with a progressively more elongated shape in the direction of the outlet cross section.

3. (Currently Amended) The device according to ~~any of the preceding claims in which claim~~ 2, wherein the nozzle (4) is coaxial with the cylindrical body.

4. (Currently Amended) The device according to ~~any of the preceding claims, in which claim 3, wherein~~ the cross section of the nozzle (4), in the divergent portion has two perpendicular axes of symmetry, the maximum width according to one of said axes, referred to as minor axis (17), remaining substantially unvaried in the passage from said restricted cross section on the outside, the maximum width according to the other axis, referred to as major axis (16) increasing progressively towards the outlet cross section.

5. (Currently Amended) The device according to ~~any one of the preceding claims, in which claim 4, wherein~~ the outlet cross section of the nozzle (4) is elliptical, rectangular, or rectangular with

the edges rounded off.

6. (Currently Amended) The device according to ~~any one of the preceding claims,~~ claim 5, comprising a second pipe (5), set coaxially around said first pipe, and one or more second holes (6) made in the head that set in communication said second pipe (5) with the outside.

7. (Currently Amended) The device according to Claim 6, ~~in which~~ wherein the second holes (6) are arranged around said nozzle (4), along a circumference concentric with the axis of the nozzle (4).

8. (Currently Amended) The device according to Claims 4 or 6 or 7, ~~in which~~ wherein said holes (6) are arranged within an angle ( $\square$ ), centred on said longitudinal axis and co-planar with a cross section of the nozzle (4), with respect to said minor axis, not greater than  $45^\circ$ , preferably not greater than  $30^\circ$ .

9. (Currently Amended) The device according to Claim 8, ~~in which the~~ wherein the second holes (6) are symmetrical with respect to said major and minor axes and define respective axes parallel to the axis of the nozzle (4).

10. (Currently Amended) The device according to ~~one or more of the preceding claims,~~ in which claim 1, wherein there are provided three injectors (3, 3', 3'') arranged with respective axes substantially parallel and co-planar.

11. (Currently Amended) A method for supplying components to a furnace for melting metal material by means of a device according to ~~any of the preceding claims,~~ claim 1, comprising the supply of oxygen through the nozzle (4), in which the oxygen is injected in the dross layer, and comprising the supply of carbon through a pipe for injection of carbon, in which the carbon is injected in the dross layer and underneath the pipe for injection of oxygen.

12. (Currently Amended) The method according to Claim 11, ~~in which~~ wherein the outflow of the oxygen through the nozzle (4) is subsonic.

13. (Currently Amended) The method according to Claim 12, ~~in which~~ wherein the nozzle (4) for the oxygen is set in such a way that the outlet cross section has the maximum width in a substantially horizontal direction.

14. (Currently Amended) The method according to any one of Claims 12 or 13, ~~in which~~ wherein a fuel gas is fed through the second pipes.